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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.             | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------------------|------------------|
| 10/509,766  | 09/28/2004  | Soodesh Buljore      | CR00556P                        | 2151             |
| 22917 7590 01/19/2007<br>MOTOROLA, INC.<br>1303 EAST ALGONQUIN ROAD<br>IL01/3RD<br>SCHAUMBURG, IL 60196 |             |                      | EXAMINER<br>NGUYEN, LEON VIET Q |                  |
|   |             |                      | ART UNIT                        | PAPER NUMBER     |
|   |             |                      | 2611                            |                  |
| SHORTENED STATUTORY PERIOD OF RESPONSE  |             | MAIL DATE            | DELIVERY MODE                   |                  |
| 3 MONTHS  |             | 01/19/2007           | PAPER                           |                  |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/509,766

Applicant(s)

BULJORE ET AL.

Examiner

Leon-Viet Q. Nguyen

Art Unit

2635

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12/6/2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 September 2004 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. Applicant's amendment overcomes the following objection/rejection:
  - a. Objection to the Oath/Declaration;

***Response to Arguments***

2. Applicant's arguments filed 12/6/2006 have been fully considered but they are not persuasive.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-2, and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Hottinen et al (WO 01/69814 A1) for the same reasons as set forth in the last Office Action.

5. Claim 7 is rejected under 35 U.S.C. 102(b) as being anticipated by Hottinen et al (WO 01/69814 A1).

Re claim 7, the claim limitations as recited have been analyzed and addressed in the above rejections with respect to claim 1. It would be inherent to have an apparatus to perform the method as claimed.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 3 rejected under 35 U.S.C. 103(a) as being unpatentable over Hottinen et al (WO 01/69814 A1) as applied to claim 1 above, and further in view of Raleigh (US 6377631) for the same reasons as set forth in the last Office Action.

***Response to Remarks***

Applicant argues that Hottinen does not include any suggestion of a plurality of receive antenna elements (Amendment, pgs. 4-5) and that the complex weighting matrices are functions of the respective transmission channels of the data streams between each of the plurality of N transmit antenna elements and each of the plurality of M receive antenna elements (Amendment pg. 4).

Examiner respectfully disagrees.

Hottinen clearly discloses the use of at least one receiver (pg. 1 lines 8-9) and thus it is assumed that two or more receivers can be used to form an array of receiving elements with each receiver representing a receive antenna element.

In Hottinen, the weighting matrices used as noted in the previous office action correspond to the transmitter array and a single receive element (20). However since it has been stated that more than one antenna receive element can be used in Hottinen, it is inherent that the weighting matrices also be a function of each additional antenna receive element.

Regarding claims 3 and 4, no specific issue was raised. Patentability of these claims are contingent upon the merits of their respective independent claims.

For the reasons above, the previous grounds of rejection as set forth in the last Office Action are maintained.

***Conclusion***

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

***Contact***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leon-Viet Q. Nguyen whose telephone number is 571-270-1185. The examiner can normally be reached on monday-friday, alternate friday off, 7:30AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vu Le can be reached on 571-272-7332. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2635

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Leon-Viet Nguyen/



**VU LE**  
**SUPERVISORY PATENT EXAMINER**